MOKELE-MBEMBE

An Investigation into Rumors Concerning a Strange Animal in the Republic of the Congo, 1981

Herman A. Regusters

During the last quarter of 1981, an expedition was conducted in the northern Likouala region of the République Populaire du Congo. Known as The Regusters' African Congo Expedition (TRACE), the expedition sought primarily to collect tangible evidence relating to the existence of a strange monster said to inhabit the Congo Basin. The animal is called *emeula natuka* in the Bomitaba dialect of the region in which the expedition took place, interpreted as "eater of the tops of the palms." In the Lingala dialect the animal is called "mokele mbembe," interpreted as "one who stops the flow of rivers." The Bomitaba tribe is a subgroup of the Songha people, who constitute approximately 30,000 of the Likouala region population. Little is known of the Songhas other than that they migrated from the wet forests of the northeastern part of the basin, accompanied by pygmies in a sort of symbiotic relationship. The Congo Basin represents an area of more than 800,000 square miles, historically avoided by researchers and explorers—except for the river—because of the formidable obstacles within the forests. However, the probability is generally accepted that the basin harbors a wealth of still-to-be-discovered species of flora and fauna thus far inaccessible to science.

BACKGROUND

Reports of sightings of huge half-elephant, half-serpent animals date from the seventeenth century, when Europeans first made contact with the indigenous peoples, and came from places as widely dispersed as the countries known today as Zaire, Gabon, Cameroon, Uganda, and the Congo (RPC). The similarity in the stories told by people of various cultures served to support a belief in their validity. In the nineteenth century, as missionaries moved through the area, the reports multiplied. Although an actual sighting by "civilized" man has never been recorded, there have been claims of finding huge unidentifiable footprints. The capture of a living okapi, an animal long thought to be extinct, at the turn of this century served to increase a belief in the probability that relic forms survive in the basin. Several investigative parties were forced back by disease and by hazards of the physical terrain. Since all prior investigations were conducted by the French and the Germans, the two world wars diverted

attention from these academic inquiries, and later political instabilities in the countries surrounding the Congo Basin discouraged further interest.

While engaged as an aerospace engineer at the California Institute of Technology's Jet Propulsion Laboratory, these reports and their associated mysteries caught my attention. I perceived a direct relationship between the exploration of the still largely uncharted basin and the application of the instrumentation for collecting geophysical data on which I was working. In January of 1981, I conceived and submitted to JPL/DOD a plan for an expedition to demonstrate the marriage of the LANDSAT and NAVSTAR technologies for the mapping of uncharted regions. This effort was to be integrated into a concurrent investigation into the possible existence of the legendary beast. Although the plan failed to received official sanction and funding, I decided to proceed with the expedition on my own.

PLANNING AND ORGANIZATION

The République Populaire du Congo was selected as the site of the investigation on the basis of recurring reports of the beast from the northern Likouala region of that country. Moreover, in the 1930s there had been a reported killing of two of the animals by forest-dwellers at Lac Tele. The lake lies roughly 160 kilometers north of the Equator at 17°10′ E. longitude, and 1°20′ N. latitude. The preservation of any hard physical evidence seemed most probable at such a location.

My original concept envisioned the use of an amphibious aircraft for the insertion of a team at the lake. However, owing to lack of physical data on the lake, the plan was revised. Instead, an aircraft was employed to transport the

group to the northernmost available landing site. Current technology was integrated into the plan to the extent limited by available funds and resources. LANDSAT 1:500,000 imagery data were employed for preliminary assessment of the terrain. More than thirty foreign and domestic organizations contributed materials and equipment to the expedition, and all funding was donated by private sources. When we departed for Africa, we were accompanied by more than a half a ton of equipment and instrumentation, including infrared cameras, high-intensity illuminators, weapons and ammunition, communication gear, solar collectors and battery packs, and medical supplies. A low-light-level TV failed to arrive prior to our departure date. Use of a twin-engine, STOL aircraft was donated by a French company.

On September 6, 1981, I left for Africa accompanied by my wife, Kia, who served as coinvestigator and medical officer. Kia holds a graduate degree in psychology, and is currently completing her studies as a doctor of chiropractic. She is also trained in naturopathic medicine, C.P.R., and first aid techniques. We were later joined in Brazzaville by a photographer, Darby Switzer, and by a naturalist from Ghana, Kwabena Amenkwah.

When we arrived in the République Populaire du Congo, a presentation was made to the Ministère des Eaux et Forêts, Henri Djombo, to define the scope and purpose of TRACE. At his recommendation, the expedition was reorganized into a joint American-Congolese effort. On September 30, a formal agreement was drawn up naming me as Scientific Director. Subsequently, this agreement was endorsed by the ministries of National Education, Interior, Environment and Tourism, Arts and Scientific Research, and by the Université Marien-Ngouabi. Terms of the agreement also called for the inclusion of two Congolese representatives. My qualification of this term was that the representatives would be bilingual and would possess appropriate experience and training. It was also stipulated that they would be fully-contributing members. Minister Djombo designated his Director of Animal Management, Étienne-Serge Mingolou, and the chief Game Control Officer for the Likouala region, Djoni José Bourges, both of whom had been trained in France, Cameroon and Kenya. In addition to their expertise as naturalists, they would serve as liaison between the affairs of the expedition and the inhabitants of the region. My requests for visa extensions, firearm and hunting permits, unrestricted photographic privileges, and use of communication and other scientific equipment were granted without delay or complications.

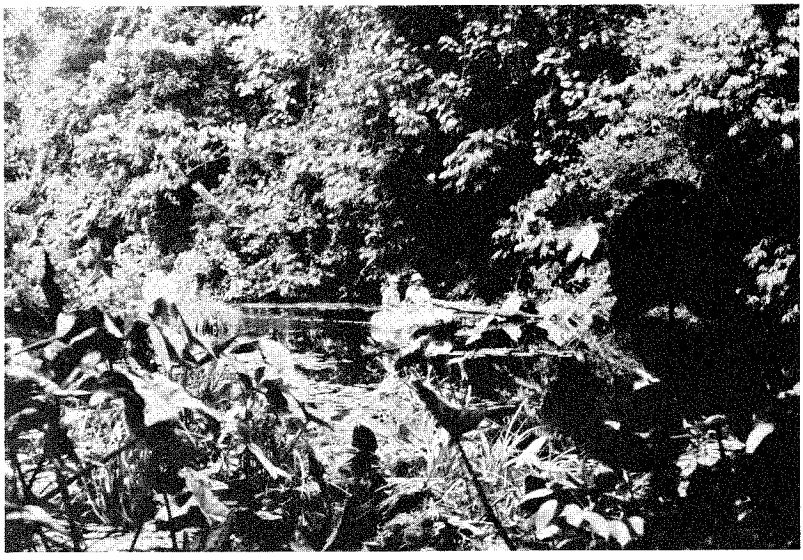
JOURNEY INTO THE CONGO BASIN

Transport to the northern region was arranged through the Aeroservice Company. The village of Epena, some 500 kilometers north of Brazzaville, was chosen as the best available landing site for Lac Tele. On October 9 the group departed from Maya-Maya International Airport at 7:50 a.m. Our STOL aircraft was piloted by the Aeroservice chief pilot, Captain Wilhelm Alain. The flight course followed the Ubangi-Congo waterway at an altitude of 5,000 feet.

From the coastal plain, our flight path carried us over the central plateau

region. The plateau is a 200-kilometer-wide stretch of treeless savanna, which eventually falls off to a flooded plain, with occasional stands of forest. Just south of the Likouala River, the sparse forest thickened into an unbroken canopy that extended to the horizon. Approximately 100 kilometers south of Epena, I requested the pilot to deviate from our planned course and fly over Lac Tele, which lies due west of Epena at a straight-line distance of 30 kilometers. The flyover gave us a general concept of the terrain that must be traversed between the Likouala River and Lac Tele. After making several circuits of the lake, we returned to Epena, where we set down on the high-grass strip at 11:30 a.m. It was apparent from the air that the entire dense forest area as also completely inundated by water, though of course we had no knowledge of its actual depth. However, the expedition was being conducted at the height of the September-December rainy season, since we had thought initially, judging from available map data, that reaching the lake by dugout was a valid possibility.

From Epena, some 150 kilometers inside the southern boundary of the Congo Basin, the expedition traveled southwest along the Likouala River, by dugout, to the village of Boa (Boha). The Likouala is a swift-flowing, winding river that originates from countless drainage tributaries stemming from the basin swamps. About 30 kilometers southwest of Boa, it is joined by a major tributary, the Bai River. The combined streams then continue south to form a major inland waterway, the Likouala aux Herbes, which is navigable by medium-sized commercial vessels during high-water seasons. The swift flow of reddish water carries along large clumps of "monk" grass, sometimes reaching island size, and quantities of other erosion debris and sediment. Throughout its length, in the basin and plains regions, the river is characterized by an extensive "false" shoreline of quaking bog and tall reeds that extends for several kilome-



ters on either side of the river. During dry spells, the river depth recedes to 12-15 meters, and the surrounding grasslands evolve into scorching savannas. The entire area is infested with serpents, crocodiles, and insects.

It was in Boa that we first discovered our map information was totally invalid. There was no possible water route into Lac Tele. The only feasible means of travel would be on foot, through 65 kilometers of forest and swamp. Boa proved to be a highly important geographical key in getting to the lake. It lies on terrain that is slightly elevated above its surroundings and from the village the land slopes down in a ramp that extends northward to within a few kilometers of Lac Tele. Starting at roughly 600 feet elevation, it slopes down gradually to 500 feet, as measured at the lake. Although a few kilometers north of the village elevation diminishes sufficiently to lie below the surrounding water table, the ramp continues as an adequate, if difficult, passage. On either side of the narrow corridor, the depth of the swamp water precludes any possibility of travel by man. It is this one factor, planned or accidental, that renders travel to Lac Tele permissible only through the village of Boa. No other village in the Likouala region has accessibility to the lake, and the people of Boa are considered as the "owners" of Lac Tele.

Seventeen porters were hired in Boa to transport our half-ton of equipment over the difficult terrain to the lake. The trek required five days.

The Congo Basin, comprising an area of more than 800,000 square kilometers, approximately equivalent to the area of Alaska, is a region of steaming swamp, forest, and savanna that straddles the Equator. A place of abundant rainfall and prevailing warm temperatures, it is characterized by its selva, or luxuriant growth of rainforest. Within the forest, the great broadleafed trees form a dense canopy overhead, allowing only a slight penetration of

sunlight, or rain. Giant woody vines, or lianas, are suspended from the tall trees, and dense thickets of shrubs and smaller vines create an almost impenetrable mass. In addition, the trees are supported on massive aerial root systems that contribute further to the formidability. Along the "Boa ramp," below the tangle of growth, water depths in the swamp varied from a few centimeters to a several meters. These waters, dyed red from the iron and aluminum deposits in a soil that has been leached of silica, represented our sole source of water for all uses.

For the five days of our trek through the forest to the lake (and on the return), we remained completely wet. In the evenings, our small tents were erected on beds of leaves that had accumulated over the years on the great aerial roots of the tall trees. This meant we had to locate an adequate "island" before dark. Consequently, our day began at 4:30 in the morning and continued until 4:00 in the afternoon. In the forest, we were always besieged by swarms of sweat bees (African killer bees) whenever we halted to camp. Although the nights were very cool, accentuating the discomfort caused by the wetness of our clothing and shelters, average daytime temperature under the canopy remained around 75° .

From our first day out of Brazzaville, we were forced to adopt the native diet, the basis of which was a starchy, rubberlike substance called *manyuk*, made from the root of the cassava. This was augmented by fruit, meat, or fish, and by *saka-saka*, a green mush made from cassava leaves. A cooked fruit called *safu*, a large seed with a thin layer of outer flesh, was also served frequently. In color and shape, it looked like a miniature eggplant; in taste and texture, it resembles a wild avocado. Citrus fruits, pineapples, bananas, yams and plantains were readily available in Boa, but only occasionally in Epena. Bread was not made or available in the region. Meats were monkey, crocodile, and, infrequently, antelope and river hogs. Although pigs, goats, and chickens were domesticated, they were rarely used for food. Exclusive of meats and fish, all these commodities were available only in the established settlements. In the jungle, game was the only food, largely primates, since they were the most prolific. Several full-grown lowland gorillas were killed by the porters, who relished the meat, during the course of our trek. Fortunately, we were able to rescue and free several babies. Apart from meat that could easily be broiled without utensils over an open fire, no attempt was made to prepare food that required cooking.

On the fifth day of our march the "Boa ramp" disappeared, within three kilometers of the lake. Walking in water that was often chest deep, we required more than six hours to negotiate the final distance.

PHYSICAL CHARACTERISTICS OF LAC TELE

Depending on the date of the reference material, the spelling of the lake name is alternately Tele or Telle. Since there is no such word as *tele* in the French language, it is assumed that Tele is the correct spelling of the Kongo word *tele*. Literally, the name Lac Tele may be interpreted to mean "virgin," or "new," lake.

Before French colonization of the area, the lake was called "Bangena," after the chief of the Bomitaba tribe that ruled in this area. More recently, the form "Telle" is commonly used. Apparently, prior to our expedition the full extent of knowledge associated with the physical characteristics of the lake had been hypothesized from brief areal surveys. This supposition is further supported by the fact that we found the current orthomorphic-projection maps, issued by the French Institut Geógraphique National, to be in error.

The lake appears circular as viewed from the air, but what appeared during our overfly to be tributaries proved to be lobes of the lake that merged into marsh. Oddly, these lobes occur only along the western shore. The lake lies at 1°2′ N., 17°09′ E. Landsat satellite imagery, probided by Dr. Nevin Bryant of the Image Processing Laboratory at the Jet Propulsion Laboratory, was used to augment the available map information. During our stay at Lac Tele, my wife and I conducted a simple but thorough survey, using a radial distance measurement technique. A Davis split-image optical device was used for the purpose. The lake morphometry was established as 3 kilometers along the north-south axis, and 2.5 kilometers along the east-west axis. Our independent calculations were later verified by Dr. Bryant to be within 0.08 kilometer of agreement. Ten distinct large lobes were discovered, extending for as much as half a kilometer into the surrounding jungle. As they reached into the jungle, the lobes became dense with emergent growth, finally becoming paludal and merging with the jungle swamp. An observation made during a heavy shower indicated a cyclic flow in one of the major lobes (#1). The water reversed its direction every 15 minutes.

The lake itself proved to be an enclosed, mirror-surfaced body, with the littoral jungle creating a false shoreline. Except along the northern sector, a prolific emergent growth occupied the littoral areas. Using a 20-centimeter flotation balloon, a test was conducted to determine the direction of surface currents; these were found to circulate in a clockwise manner. The float circumscribed the lake in a 40-hour period, and never floated into, or became entrapped by, any of the lobes. We were unable to establish an abyssal depth for the lake. Strong subsurface currents were evident, even in the littoral zones, as were rapid variances in temperature. Average daylight surface temperature remained between 82° and 85° F.

The water was heavily laden with particulate matter. Visibility was totally inhibited below a depth of about 10-15 centimeters. A large, 3-celled illuminator became completely obscured when submerged to a depth of one meter at night. As far as we could determine, the bottom material was made up exclusively of decomposed vegetation. Material dredged up and allowed to dry became readily combustible. Using a long-handled shovel, I was unable ever to bring up soil material. The apparently high nutrient content of the water supports an astonishing population of aquatic life, which in turn initiates a food chain that supports an equally abundant variety of fauna. Fifteen species of edible fish were cataloged. In addition, great quantities of shrimp, crabs, and clams were found among the littoral plant growth, as were many types of small tropical fish.

When we arrived in the Congo, there was much speculation concerning the lake as a source of magnetic disturbance. Allegations to this effect were expressed both by Congolese officials and by Europeans, some of whom were commercial pilots. However, during our flyover of Lac Tele, neither our hand-held devices nor the aircraft instrumentation reflected a magnetic deviation—at least at an altitude of 1500 feet. As a rule, low level flights over the region are forbidden by the government, and are respectfully avoided by commercial pilots. The bearers who accompanied the expedition to the lake possessed an inherent fear of lobes 6 and 10, refusing to travel in those areas. (Interestingly, each of our sightings of the strange animal occurred in the vicinity of lobes 6 and 10.) The same fear was evinced with respect to a diameteric traverse of the lake; they believed that their boats would be sucked into the depth at the lake's center. Strong currents of undetermined direction were noted during our own excursions to the center, and we measured depths of more than 200 meters. Relevant cartographic information developed regarding the physical characteristics of Lac Tele was forwarded to the Institut Géographique National (IGN) in Paris.

BIOLOGICAL SAMPLE COLLECTION AND OBSERVATION

In addition to geographical data, considerable time was devoted to the observation and documentation of biological data. An impressive collection of indigenous fly and mosquito samples were collected for Dr. Tueau, an entomologist with the Université Marien-Ngouabi in Brazzaville. Additional insect samples were provided to Dr. Charles Hogue, at the Los Angeles Museum of Natural History.

Several samples of water, micromarine life, and top-soil were provided to Wayne Schubert at JPL for analysis. Samples of surface deposits, believed to be the aftermath of the passage of the strange animal seen at the lake, were also collected for further analysis.

In response to a request from Dr. John F. Trape of the Office de la Recherche Scientifique et Technique Outre-Mer (France), a number of serpents were captured and preserved for analysis. This organization contributed funding and equipment to the expedition. They also conducted an orientation session and provided reference materials to help in the identification and handling of serpents, prior to our departure.

The three naturalists on the team identified and cataloged an extensive list of wildlife indigenous to the area. Four different species of crocodile were identified. The lake supported a huge population of these animals, which constituted a large part of our fresh meat supply. Twenty-four mammals were listed; the most prevalent were primates and included a significant population of lowland gorillas. Among the large cats, the panthers seemed to be the most numerous. Water and land fowl were varied and extensive. Large colonies of bats resided under the dense canopy, one variety of which had a wingspread of about twenty-four inches.

A wide variety of bees were seen, covering a broad spectrum of colors from yellow to iridescent blue and green. The four different types of honey collected and sampled all proved to be quite flavorful. The small, bothersome sweat bees we had encountered during our walk through the jungle were not present at the lake. Ants, in a wide range of kinds and sizes, were most destructive among the insect pests. Great colonies of ants and termites were always present, and caused damage to nylon tents and netting and to leather

goods. Large tsetse flies were ever-present from dawn to dusk. However, they were encountered only on the lake and along the shore, and within a distance of some 50 meters into the jungle they completely disappeared.

EXTRAORDINARY OBSERVATIONS AND OCCURRENCES

At 5:30 on the evening of October 28th, we noticed perturbations in the glass-smooth surface of the lake, which implied the presence of a sizable object. Neither our pneumatic boat nor any of the dugouts were on the lake at the time. Even so, the velocity and magnitude of the surface disruption exceeded that which would have resulted from any of our watercraft. The weather was clear and calm, with no noticeable movement of air.

On the following morning at 6:30, a moving object was again sighted by one of the men. I estimated it to be about 1.5 kilometers southwest of our location, as it moved south, away from us. A long neck-like member could be clearly distinguished in the clear morning air. The sighting was witnessed by every member of the scientific team, except the photographer. At least ten members of the Boa group also witnessed the event. The color of the object could not be determined, appearing only as a dark color. After we had watched it for more than five minutes, it submerged and did not surface again. Two additional brief sightings of a similar kind were made by members of the scientific team on November 1st and 2nd. At 11:45 on November 4th, as Kia and I investigated the southernmost lobe of the lake, an extraordinary and loud animal cry was heard. It came from the jungle along the shore of the lobe, and seemed to be not more than 40 or 50 meters into the thicket. The cry can best be described as starting with a low windy roar, then increasing to a deep-throated trumpeting growl. Sounds of a large beast making through the bush were clearly distinguishable, as it moved away from us farther into the swamp. The roar recurred in about five minutes and then was not heard again. After a lapse of about 30 minutes, we disembarked from the boat and entered the jungle in an attempt to locate some trace of the beast. However, the standing water and soft leaf beds obstructed any such possibility. Subsequently, the cry was heard by all members of our party, at various times throughout our stay at the lake. The Congolese attributed its source to the *mokele-mbembe*. Attempts to record the sound on several occasions resulted only in rather poor quality productions, owing to the high level of foreground noises.*

At 9:00 a.m. of November 24th, the appearance of a very large object moving through the water was witnessed by four members of the expedition, Étienne, Djoni, Honoré, and the Boa chief. It was about one kilometer distant, at the north end of the lake between the ninth and tenth lobes. As they watched, the object moved through the water, leaving a visible wake on the surface. No head or neck members could be seen above the water level because of the dis-

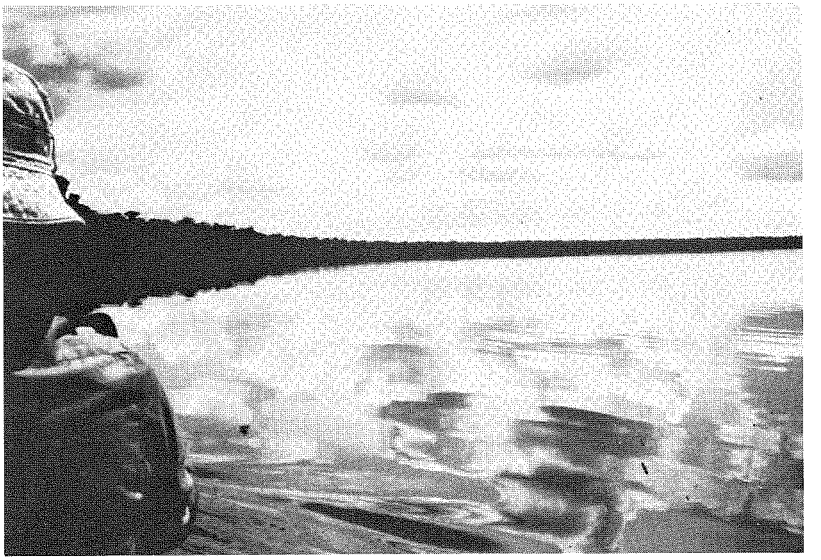
*A spectrum analysis of the sound samples obtained was later performed by K. W. Templin, Manager of the Dynamics Research Facility at the Borg-Warner Corporation, with most interesting results.

tance. The object was described as appearing dark-brown in color, and smooth-surfaced. It was observed for about eight minutes, part of that period with the aid of binoculars, after which it submerged and did not reappear. All four of the observers were intimately familiar with the fauna of the area, and agreed that the object was much too large to have been the back of a hippopotamus, which in any case is not indigenous to the region. The profile of a crocodile would have not been visible at such a distance. The observers were in full agreement that what they had seen constituted, in appearance and behavior, something totally beyond their personal experience.

In the early afternoon of November 27th, while exploring the first lobe at the southernmost point of the lake, Étienne and Kwabena, members of the scientific team, heard the same loud growling sound at close proximity. It was shortly followed by the unmistakable splash of something huge entering the water. A little later, during an exploratory trip at the northern end of the lake between lobes nine and ten, Kia was surprised by the appearance of a long, serpent-like neck emerging from the water, at an estimated distance of about 30 meters, and facing in the direction of the boat. The broad neck tapered into a slender head about two meters above the water. In the bright midday sun, its color appeared to be dark gray and its skin smooth. After wavering from side to side only once, the head and neck entered the water straight down, vertically, as the creature submerged swiftly. Apparently it had seen the boat and its occupants, yet no aggressive action was instituted. The entire episode lasted for no more than five seconds, and in the surprise of the moment few other distinguishable features were observed. The animal did not reappear during the rest of that day.

The investigations of the north end of the lake resulted in two events that gave apparent support to the probable continued presence of forest-dwelling peoples in the area. Although the people of Boa steadfastly adhere to the view that no pygmies or other forest dwellers live in the area today, they themselves refused to travel to the northern sector of the lake. The killing of the two *mokele-mbembe* creatures in the 1930s was said to have taken place at the northernmost lobe, which is the site of the old pygmy lodge. During our first excursion into that area on November 7th, a smell of smoke and cooking was detected, emanating from the forest. The wind was blowing toward the south, and the distance from any of our camp locations was more than a mile. While in the same area on November 27th, Kia and I disembarked from the boat to have a first-hand look at the forest. Shortly after we landed, we could hear distinct sounds of footsteps coming toward us. Within a few moments, we heard similar sounds approaching from two other directions, accompanied by a series of rapid whistles, or clicks. We could see no one, and decided to depart forthwith. Later, at several places nearby, stakes similar to those used by the forest dwellers to secure their fish nets were found, clearly purposely implanted.

Curiously, the primates and birds at the north end of the lake seemed to be far less intimidated by the presence of humans than those at the south end, which are hunted by the Boa people. Also we heard no sound of lowland gorillas at the north end, where, as mentioned earlier, the ground was higher and drier than in the south. This elevation permitted a greater degree of visibility through the



forest growth, which here contained a higher percentage of palms and ferns.

Another strange incident was related to our group while we were in Boa. It concerned an event that took place some three kilometers northeast of the village, in February 1981. Three full-grown elephants were discovered dead and floating in the water. All had been killed by two punctures inflicted at the center of the abdomen. The bulls still retained their ivory, eliminating the probability of poachers, or of village hunters seeking food. The animal said to be responsible for these killings was described by the villagers as a strange rhino-like creature that inhabits the nearby forests. They took us to the site and we documented the area on film. We heard of this event only after we had arrived in Boa; apparently it was not known to the people of Epena, nor had it been related to any other expedition passing through the area.

One additional phenomenon warrants mention in this listing of strange events. Enroute from Epena to Boa on the way in, our boat was flagged down as we passed the village of Moundo, and I was given a letter, the content of which requested our assistance in the investigation of several strange occurrences in that village. A village woman had recently been paralyzed through an encounter with something in the water. We could not stop then, but on our return trip, a month later, we were again beckoned into the village and were taken to the spot where this event occurred. A strange animal was said to have been sighted by several of the village elders.

HEALTH MAINTENANCE AND MEDICAL PROBLEMS

Happily, no accident or major injury was sustained by any of the personnel during the entire course of the expedition. Treatment was limited to minor cuts,

bruises, and sprains. Strict guidelines laid down for the handling and use of firearms were readily adhered to by all persons.

With the exception of Kia, everyone experienced periods of fever, varying in length and severity according to the individual. At the lake, we were constantly harassed by a wide variety of insects. Dysentery was commonplace, again in varying degree according to the individual susceptibility. Once in the jungle, the only sources of water were the swamp and the lake. Both were heavily treated with Halazone for drinking purposes, but obviously quantities of microorganisms could have been ingested by everyone during bathing and through hastily treated drinking water. Medical examinations after our return revealed that three members of our party were suffering from acute anemia. Considerable weight losses were also experienced, in my own case 40 pounds. The extraordinary exposure to moisture and water by members of the expedition team resulted in severe drying of the skin, especially of the feet and lower legs.

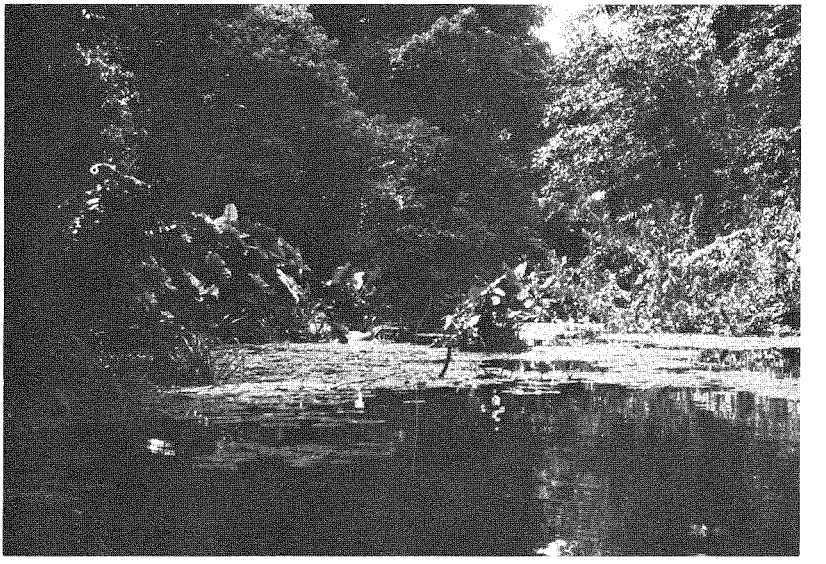
Although physically strong, the indigenous people are nutritionally deficient, and were subject to many maladies. Those in the outlying villages appeared to maintain a better state of health and well-being than those in the larger villages such as Epena. In part this was attributed to a greater availability of foods, particularly fruits and meats. Measles and cankerous wounds were prevalent among the children in all the areas we visited, and venereal diseases were commonplace among the adults. Several of the men who journeyed to the lake with the expedition contracted malaria.

More than 95 percent of the expedition's medical stores were expended on treatment of the local population of Epena, Boa, and the other villages. In her capacity as medical officer, Kia kept a detailed record of the various ailments encountered, and the treatment administered. Before we left the region, she selected an individual in both Boa and Epena whom she indoctrinated in the basic principles of public health care and sanitation.

Two infant lowland gorillas were also treated by Kia—one for an infected gunshot wound, from which he succumbed after several weeks, and the other for cuts and rope burns.

PERFORMANCE OF EQUIPMENT

The humid, hot environment was hard on all of our equipment and clothing. After two months in the forest, only one of our seven cameras continued to function normally. Nickel-cadmium batteries were of little use; the humidity maintained a discharge moisture path between the closely spaced terminals, rendering them useless in short order. Corrosion of all exposed metal parts—for example, on our firearms—was a continuing problem. When all our lightweight lubricants were gone, the peanut oil we used for cooking was used to protect exposed metals, though we had to boil the oil first to purge it of its high moisture content. Rotting of clothing and leather was another problem. Here again, the used cooking oil was retained for treating boots and other leather fittings.



Electronic instruments and communications equipment also proved highly susceptible to the moisture. LCD displays began to bleed, distorting the numerals, after a few weeks of exposure. Our solar collector, used for recharging battery packs, and the aluminum cast flashlights proved most durable in the environment.

CONCLUDING COMMENTS

The TRACE excursion into the Congo Basin has been the most extended mission of its kind in recent times. Steadfast in their determination to succeed, its participants endured the extreme physical hardships and personal discomforts imposed by that hostile world. But in the minds of those who made the journey, there remains no doubt of the existence of at least one type of strange creature.

Approximately 65 million years ago the high-shouldered dinosaur species became extinct, with one exception: Atlantosaurs continued to thrive during the Cretaceous period in Africa and South America. Apparently their success was not due to the development of any new characteristics. Their body profile remained similar to that of their ancestors, except for smaller size. The Congo Basin could well be a living museum for the sauropod species Antarctosaurus. The gorilla was not seen by Western man until 1855, and the pygmy hippopotamus not until 1911. and in 1975, an entirely new genus of shark was discovered.

The *mokele-mbembe* has remained an undeniable reality among the indigenous populations of Equatorial and Central Africa, resisting suppression by the skepticism of scientists of the civilized world. The forest people have proved themselves to be correct on too many other occasions not to allow an appropriate measure of latitude to their beliefs. Far too often, the forest dwellers are

looked upon as ignorant savages. In reality they are a perceptive people, whose intellect and cunning are well adapted and attuned to contend with the hostility of their environment.

As the one who bore final responsibility, I forbade pursuit into the jungle following presumed contacts with the mysterious creature. Any such action would be ludicrous and totally unwise. First, the only way of moving through the dense bush would be by using machetes for cutting, while simultaneously attempting to negotiate waist-deep swamp. This circumstance would moreover make retreat impossible. Second, 50 meters into the forest orientation becomes equally impossible. Trails are nonexistent at Lac Tele, and not even the villagers who accompanied us would venture from the camp area. Finally, to reach the lake was in itself a significant accomplishment, without endangering the lives either of the team or of the local people unnecessarily.

DISCUSSION

Q. Were all of the sightings made in the daytime?

A. Yes.

Q. Did you try to take pictures?

A. Yes. Taking pictures is not a simple situation. First, there were times when there were no cameras at hand. At the time of the closest sighting, what came into play was human response. You have about five seconds to get over your awe and take a picture. That's the extent of it. The whole character of the jungle is completely different up on the north side of the lake. You can see much deeper into the jungle, and there are some strange stories about what we experienced up there. . . . In addition to the animal. We were not seeing it very well, but you recall the slide of the one photograph we did get. What we were looking at there was a portion of the head as it submerged.

Q. So you estimate that from edge to edge what we saw there of the object on the screen was about a meter?

A. Yes. At most.

Q. You theorize that that was the middle part of the animal? Because it's surely not the long neck you showed.

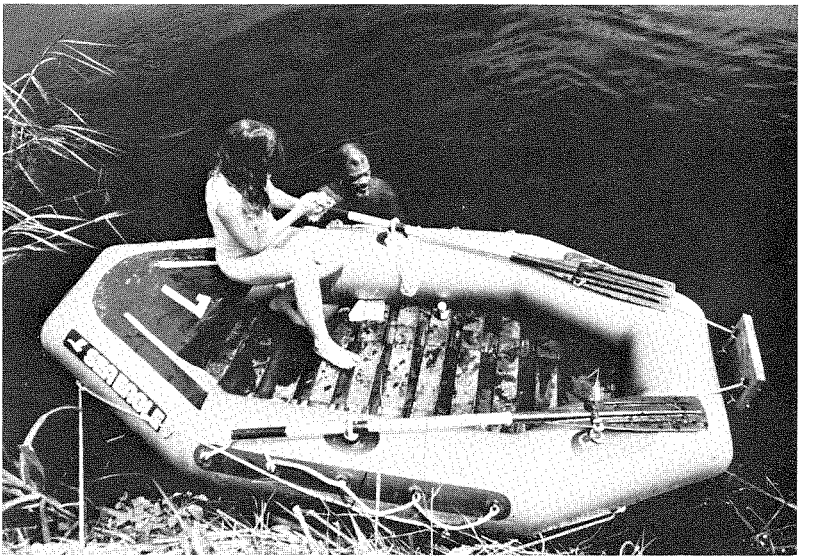
A. No, I'm theorizing that this was just part of the top of the head and some of the neck. The scale may be even smaller.

Q. This was taken during nighttime, right?

A. No. This was taken during the day. One of the complications that came into play was not having time to focus and adjust the camera.

Q. One of the members of your team used the word dinosaur in his log. Isn't this a rather far out assumption?

A. I think he used it for lack of anything else descriptive of a living animal, and the young man who wrote the report did a very good job on that. It's implicit in the word dinosaur that it's extinct. If you saw something that looked like a sauropod, what other name could you give to it?



Q. A huge mammal left over from the ice age. Dinosaur is used to describe a specific animal.

A. Use of the word dinosaur brings to mind the general image of what we witnessed. We are not saying it's a dinosaur. I'm not in the field of biology and I don't want to get myself embroiled in a controversy. Which is why I stay away from saying it's a dinosaur. When some hard photographic evidence, such as a picture of the entire creature, is provided, then the people in that field will have to identify and name the animal. What do you think? What could it be? Having seen that photograph, what would you say it was?

Q. [Unintelligible from tape].

A. All the dinosaurs did not die out in that period. There were some that survived into the upper Cretaceous period, such as the Atlantosaurus, sauropod that looks very much like the Brontosaurus, much smaller with the same profile. To this date scientists do not know why that species of dinosaurs continued to survive in Africa, long after the other high-shouldered species became extinct.

Q. Does anybody believe that it is possible to find an animal not described in the literature? That's possible. Now you in your report talked about the okapi. You said the okapi was an interesting example because it was clearly an extinct species of animal, and when was it discovered? 1900?

A. 1903, I believe. The local people continually told European explorers about this animal. In fact, they showed them skins. The Europeans said no, it died out 65 million years ago. And in 1903 a British army officer captured one alive, in what is now Zaire.

Q. But you also have to say, "who are those Europeans?" I mean, maybe they were scientifically uninformed.

I was wondering about this very large reptile here. It could maybe stay submerged for an hour or two but it would have to come up to breathe every so often. I was wondering

why you didn't have frequent enough sightings to sit there and wait with a telephoto?

A. How would you predict, on an almost two-mile-long lake, where something is going to come up? Then with a 200mm telephoto, two miles away you are not going to see much of anything.

Q. How far were you from the animal at the closest sighting?

A. I estimate about 200 feet or so.

Q. About how rapidly would you say it was moving?

A. It wasn't moving at the time. It was just there, it just stuck its head up. In fact, the neck did not go down in the expected forward motion. It went down straight.

Q. Didn't you say you heard it when you were out in the jungle? If it's this big wouldn't it have left tracks to follow?

A. In the jungle there is only swamp. There is nothing to leave tracks in.

Q. How about these footprints that appeared?

A. We didn't see any footprints. They were reported.

Q. Are you sure you saw a hump behind its head?

A. Yes. The hump was a distinctive feature. It is not a snake. And it is not, as someone else said, "a large turtle with a long neck."

Q. I think the point that was trying to be raised here is whether you saw any evidence of a large animal having crashed through trees or so on.

A. Apparently, when elephants plow through that forest they don't leave a trail. You are talking about something leaving a distinct trail. Even where we cut through the jungle to get into the lake, when we came out there was no evidence of where we came through. It's dense brush and there is water underneath. There are large animals all around — panthers, leopard, gorillas — you never see them or any evidence of their presence. You only hear them.

Q. How many sightings were there?

A. Five.

Q. Over what time-frame did they occur—one day? one week? For what period?

A. The sightings occurred at various times during the 32 days we spent at Lac Tele.

Q. You saw some at the beginning of the 32 days and some at the end. Right?

A. That's correct.

Q. How deep was the water, approximately? Could you tell how deep the water was?

A. The depth even close along the shore varies considerably. It depends on one's location.

Q. Did you try to bring the boat near the animal?

A. No. Would you? No, I wouldn't recommend it.

Q. You mention a report about three elephants that had been killed. Would you say that the animal was responsible for that?

A. No, I didn't say that. The village people were talking about a different type of animal.

Q. You don't see a correlation between the three elephants, which is one bit of evidence, and something that killed them? You don't know what killed them?

A. You're talking about another event 50 miles away from the other. They described the elephant killer as some type of forest-dwelling rhino.

Q. Are there any of you who doubt that a 500,000 square mile patch of jungle is insufficient to support some animal species we haven't seen?

A. No.

Q. You say you heard a number of stories from the local people. How sure are you about these stories? It seems to me there's a possibility that they might have been trying to make fun of Westerners.

A. I don't think so. You mean they were just making entertainment for their own benefit because there is nothing to do around the village?

Q. I have heard of situations in which the local people simply respond as might be expected of them by the interrogators.

A. I think one can implant such things in others' minds, if you wish to initiate that kind of thing. However, a researcher who practices such a thing is not serving his purpose very well.

Q. There is a strong propensity to please, if you are talking to somebody in a language not well understood. It's the custom to be polite and to want to please you. Do you think some of the stories might just be superstition? You said there were a lot of superstitions about the lake and the area surrounding it. Actually, how much of it was real fear and how much of it was just fear because my father feared this lake before me and his father and so forth?

A. Oh, I think it was real. It was real fear on their part. Now I think we should also clarify that these are not localized stories. They exist also in the countries of Gabon, Cameroon, the Central African Republic, Uganda. They are not confined to the Congo.

Q. But if you say Uganda, I know almost every inch of Uganda and the chances of there being any strange animal today in Uganda that hasn't been seen by some reliable observers seem to me close to zero. So if it were seen there, that takes away from the probability that it could exist in other parts.

A. No. What I am saying is the *stories* exist in all these countries. Not that the animals have currently been seen in those areas.

Q. Well that is perfectly true in African folklore. We had someone talking about African folklore last term—Harriet Masembe, who happens to be a Ugandan. She described how stories will start in one area and then will be spread over an area of several thousand miles.

Q. Were you carrying a camera with you most of the time during your work on the lake?

A. Yes. Almost all the time.

Q. And you saw the animal during one sighting for eight minutes?

A. There was no camera at that location, in that particular instance. We could not spend all of our time sitting and staring at the lake, saying "When is this animal going to arrive?"

Q. While you were looking for it you didn't carry a camera?

A. No, I didn't say that. Because most of the time, whenever we were on the lake, we always had a camera on hand. But I didn't say that when we saw it for eight minutes we were on the lake. There was not a camera in the vicinity at the time it was spotted for the longest time.

Q. But you will admit that leads to suspicion in peoples' minds.... Because you wanted it so much, and for those eight minutes there was no camera?

A. The time it was spotted for eight minutes it was seen by three African nationals, who did not have a camera and who did not know how to operate the camera equipment. So that is why there was no camera in the vicinity.

Q. When they saw it for that length of time, did they have any ideas as to color and texture?

A. From what we saw and from their description, it was a slick kind of thing like the hide of a hippo when it is wet. And about that color, it simply appeared dark gray. Of course, beyond a certain distance, the human eye sees everything as black and white.

Q. What would such an animal feed on?

A. In my opinion, I would think it would be a herbivorous type of animal.

Q. How big an animal would you guess it to be? In total length? How big do you think it was? If that neck was six feet, how would you proportion it out?

A. The neck being proportional, I would think that if six feet were visible, there would be another six feet of neck under the water. And thinking in terms of that being one-third of body length for an animal such as a sauropod I would at a minimum figure the length to be three times twelve—36 feet.

Q. But nobody in your expedition saw more than the neck and back?

A. I just explained my extrapolation formula.

Q. You said there were some stories about the north side of the lake?

A. Well, of course the first taboo is that the animals were killed there.Since almost the whole tribe was wiped out from trying to eat the animal, that discouraged the forest people from inhabiting that general area. Well, the story I was referring to was that the Boa people swore that there were no pygmies, or indigenous forest people in that area any more. Only my wife and I visited that area—twice. On both of those occasions something happened. The first time we smelled smoke. We had been making fires long enough with the wood of the jungle, and there is a very distinct smell to the burning of that wood. There was definitely a fire burning up there some place. The wind was

blowing toward the south, and our camps were in the south, so that eliminated campsites as its source. I took the boat around several times to check that out. And there was a distinct area where you could smell the smoke as you came around. The second time we visited there Kia and I disembarked from the boat and went into the jungle to get a firsthand look at what the terrain was like in that area. The first thing we found contradicted what had been told to us by the Boa people. The ground was drier, the forest was more sparse, and certainly it was a more desirable place for anyone to camp or try to live. We wondered why our camps hadn't been set up on the north end of the lake.

Q. Is that where you would camp if you went in again by seaplane?

A. Yes, I think so, by all means. The second thing that happened was that after a few minutes we heard very distinct sounds of something walking through the swamp water. The sounds were coming from directly ahead of where we stood. A short time later a similar sound could be heard coming from the left side. One thing we knew by then was that as a general rule wild animals do not approach humans in the jungle. It was not an animal, or especially a group of them, thinking "Let's get these humans." There was something else in those jungles. The only weapon we had with us at the time was a shotgun, so I decided it would be best to leave the area.

Q. It was said that two of the animals were killed by pygmies. Did you consider looking for remains, bones, something like that?

A. The environment does not lend itself to preservation of such things. To give you an example, the insects ate through our nylon tents, and they also ate the leather on our knife sheaths. There is no way that anything is going to be preserved in that environment.

Q. You say they were killed by the pygmies or were killed at a period when the pygmies were living there?

A. They are said to have been killed by the pygmies. The pygmies were the only ones who have ever lived along the lake.

Q. Wouldn't you say it was a serious—I mean, I know that organizing something like this you didn't have unlimited money and resources—but wasn't it a serious lack on the part of the expedition not to have somebody along who was French- and English-speaking so you could have more accurate and clear translations of what people said they saw?

A. We did. The two Congolese officials spoke French, and much better broken English than the village people.

Q. So these officials spoke to you in broken English?

A. Right. And we had a French-English dictionary. But back in Boa we had a competent interpreter.

Q. So they were able to give their account of whatever they had seen through a good interpreter?

A. Right.

Q. How was the expedition financed?

A. I guess I could say I paid for the expedition—for the most part. Quite a bit of the equipment was donated by more than 30 American companies. The use of the aircraft was donated by a French company, Aeroservice, and amounted to about $16,000 for the period we used it. That donation was made afterwards, because we were sort of like folk heroes in the Congo. The business community and the people of the country really supported the whole thing.

Q. Have you tried to talk to Roy Mackal about his find?

A. I think he would have told us if he had found it. Well, now, you have seen pictures of that jungle. I don't know how you would chase down anything there. That reminds me of the way people go looking for Bigfoot. I am of the opinion that it's impossible to go into the wilds to chase down a wild thing that lives there. You have to settle down and wait for it to show itself to you. I don't know how you would chase something through that jungle to find out where it lives.

Q. Will you publish the account of your expedition?

A. I have put together a final report for the Congolese Government. That was part of the agreement concerning the expedition. And I guess there may be other things coming out later on.

Q. Do you intend to take another trip into that area in the near future?

A. I think that's pretty well assured. However, I would not walk in there again. I could not see doing that. We would go in with a plane or not at all.

Q. Would you like to go again?

A. Yes, I would like to go. There are too many things left unexplained.

Q. Would there be anything else you would do differently on a second expedition?

A. I'm sure there are quite a few things.

Q. You mentioned at one time the polaroid camera didn't work very well?

A. Unfortunately, the humidity destroyed all the film.

Q. Do you believe that others of these strange animals exist?

A. That is a good question, but I can't answer it directly for you. I would guess that if there is one animal, there are probably more.

Q. How many times did you yourself see it?

A. Twice. The animal was seen the first time about two days after we arrived at the lake. About 20 people saw that one, which was at quite a distance—about a kilometer, or maybe a kilometer and a half away. It was moving through the water and covered a distance of about a quarter of a mile at a speed more rapid than our boat would be moving.

Q. More rapid than your boat, which would be what, about 20 miles an hour?

A. No, it would be just a couple of knots—maybe three knots or something like that.

Q. Have you made much study, you probably have, of the refraction and defraction of the lake surface and of the whole question of mirages and how images are enhanced, along with the susceptibility of people who want to see something?

A. People do have a tendency to want to see something. The number of people who have been visited by UFOs in and around California, including Air Force pilots, is enough to say that this is a very characteristic psychology.

Q. You said you had five sightings of the animal. How many of these sightings were longer than, say, 15 seconds or so?

A. Most of them were over a good length of time except the one close sighting. The one I was just describing a kilometer or so away was observed for quite a while.

Q. What was the position of the animal, generally, when you saw it—always in the same location?

A. Well the first time we saw it, it was on the west side of the lake. On the lefthand side as you were looking at the map. The other times we saw it at the north end of the lake.

Q. What about the time of day of the various sightings?

A. Always in the daytime, and always with clear visibility. And remember we had lots of binoculars too.

Q. So this would not be a nocturnal animal or anything like that?

A. There were only two people who moved around at night — again, my wife and I. We were the only two who ever went out on the lake at night, but we didn't get into the jungle or anything like that. There are too many things out there at night. We didn't have instrumentation capable of long-range night viewing, so we never saw it at night.

Q. Do you know what particular group of pygmies were there? Because there is published work on pygmy law and pygmy mythology.

A. No. They must have been whatever group inhabits the lower region of the Congo.

Q. I saw some pictures you showed, you had a number of instruments, and I assume various cameras, binoculars, and so on. Also I saw a boat. What other kind of unusual equipment did you take along?

A. The infrared was the only thing we had that had a capability for seeing anything at night, and of course that is very limited in range. We had communication sets, and a solar charger. We also had high-powered illuminators, and of course weapons.

Q. Wouldn't an imager-intensifier have been a good idea?

A. Yes, we had one supposedly donated to us by the Bosch Group in West Germany, but it never arrived. Although RCA did donate the $7,000 tube we never got the electronics to go with it. An intensifier was the very first thing I went out and got before we left.

Q. Would some type of radar or sonar equipment have been useful so you could scan most of the lake without having to be there?

A. Yes, but remember you are limited. Whatever we took in had to be back-packed. We already had every available man in Boa in our group of porters and even a few women. We left behind a large quantity of our petrol and other things difficult to carry. There is no limit to the useful instrumentation you should take along, only to the funds available to procure them and to get them there. The Congolese offered us the use of a large military helicopter. The only catch was they wanted 8 million francs for it. We can design a beautiful scientific plan, instrumentation plan, but you still have to get the money.

Q. How about a professional photographer among your group?

A. One of the members of the group was a professional photographer.

Q. What was it actually like to go through that jungle?

A. The daily temperature was about 80° F, and the humidity was very high. Of course we were always wet, so not much attention was paid to the humidity. On the surface of the lake it would be too hot to touch the side of the boat. The temperature remains pretty constant during the wet season. Strangely, when the dry season began, it got quite cool and foggy at night. The jungle can be pretty chilly at night. The Congo forest, in the region where we were, does not conform to the textbook descriptions of a rain forest. It was something quite different. The arduous effort required to walk through it would be difficult to describe. I still can't believe we did it.

Q. Did you consider shooting the animal?

A. No! That was really a no-no. First of all, it is almost like a religious thing with the local people, and secondly, the government would have frowned on that. We would probably still be there in jail.

Q. I was wondering if you did any study of the aquatic environment, or any other water deposits?

A. We made a considerable number of notes on everything around us. Over 600 pages in all. The composition of the lake and its marine life is deserving of a dedicated study on its own. One can see about six inches into the water. An awful lot of pollen and other organic materials are in suspension.

Q. I don't know if this is possible, but I was wondering if it would be possible to capture the animal?

A. What would you do with it if you captured it?

Q. Didn't you take film camera, or video equipment?

A. Humidity and videotape are not very compatible. We had film cameras, yes. We have motion pictures of the trip.

Q. I was wondering if there was any problem with diseases on the trip, because a lot of rivers and swamp water must be contaminated?

A. Dysentery was quite commonplace. Everyone suffered at some time or another from periods of high fever. Several of the natives contracted malaria. We didn't. We took all kinds of good stuff along to protect ourselves. But the one aftermath of the expedition in going through our post examination is that everyone seemed to have acute anemia, and no one knows why. My exam also showed positive signs of intestinal amoeba. The results on our health conditions are still coming in.

Q. Now that you have gone and come back, and you brought back some limited evidence that the animal is more than a legend, are you finding that any foundations or others are interested in funding another trip? And are you interested in being funded for an operation like that?

A. I am certainly interested in being funded. I couldn't bear the burden of paying for another expedition myself, yet it is a task worthy of further effort. The expedition was paid for mostly by myself, but in part by some of the engineers at JPL. I am getting a very good response from the engineering community. I will be addressing the American Society of Instrumentation Engineers, and there is a lot of interest because these are the people who design the sophisticated instrumentation needed.

Q. Your description makes it sound as though there are a lot more lowland gorillas there than I have ever been given the impression of. The Leakey Foundation supported Julie Webb from UCLA who did a study of the lowland gorilla in the Cameroon and she found them very scarce and so afraid of human beings that she couldn't get near them. So I was very surprised, and it seems to me that a scientific aspect to do with behavior of the lowland gorilla would be quite a contribution to such studies.

A. These gorillas are considered by the government as endangered species. And even the fellow with us who was the Congolese director of animal management said he was amazed at the quantity of gorillas. Of course, he had never been into the area. And I guess the deeper you go in the more you will find per given area. To the forest people the gorilla has always been a life-long meat source and they were not about to change for our benefit. In fact, I discussed this with the director of animal management and asked why he didn't tell them to stop killing them. He said, "I am not going to tell them anything while we are out in this jungle." There is no denying the fact that the local people are totally in command of the situation under the circumstances and they know it.

Q. Weren't you in fear for your personal safety in being so close to a beast of such size. such size?

A. It didn't come to mind immediately at the time. The experience was one of complete surprise, and probably the next thought was to try to get a picture of the animal. And then after all that, a thought of the potential danger did occur, like "my God, suppose he comes back to look for us?" With that thought, I gave the engine full throttle and we departed.